User Manual

4 Ch Video Sever

V1.1_110614

WARINGS

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

DO NOT INSERT ANY METALLIC & ELETRIC CONDUCTIVE OBJECT THROUGH VENTILATION GRILLS.

CAUTION

<table>
<tr><td> </td><td>CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN</td><td> </td></tr>
<tr><td colspan="3">CAUTION：TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</td></tr>
</table>

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I. PREFACE

This is a four channel H.264/ MJPEG Video Server with web server built-in.

It encodes analogue signals of traditional cameras to digital signals; the users can monitor real-time video via IE browser. H.264 and MJPEG compression format support smooth video quality. Also, it supports SD Card backup. 2-way audio enables the user to have a video conference. In addition, the user can control Video Server with user friendly interface via IE browser to build a home surveillance system.

II. Product Specifications

FEATURES:

- H.264/ MJPEG compression formats
- RS-485 Control Interface (PTZ)
- RS-232 Interface
- SD Card backup.
- Wireless network connection (802.11 b/ g) - Optional
- 2-way audio.
- 4 video input
- 4 alarm input
- 4 relay out

Hardware	4CH Server
CPU	ARM 9 ,32 bit RISC
RAM	256MB
ROM	16MB
Video Input	BNC x 4
Input Video Looping	BNC x 4
Audio In/Out	4 in / 1 out (RCA type)
Alarm Input	4
Relay Out	4
RS-485	X1, for PTZ control
Power	DC 12V Power Consumption :7.56W
Dimensions (WxHxD)	218x44x202mm
Network	
Ethernet	10/ 100 Base-T
Network Protocol	HTTP, TCP/ IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP
Wireless(optional)	
Wireless Type	802.11b/g
Security	WEP,WPA-PSK,WPA2-PSK
System	
Video Resolution	NTSC: 720x480 , 704x480, 352x240, 176x144 PAL: 720x576 , 704x576, 352x288, 176x144
Video adjust	Brightness, Contrast, Saturation, Hue
Image snapshot	Yes
Full screen monitoring	Yes
Compression format	H.264/MJPEG
Video bitrate adjust	CBR, VBR
Motion Detection	3 Areas per channel
Triggered action	Mail, FTP, Save to SD storage, Relay, Samba
Pre/Post alarm	Yes
Security	Password protection
Firmware upgrade	HTTP mode, can be upgraded remotely
Simultaneous connection	Up to 10
Audio	Yes, 2-way (Duplex Support)
SD Card Management	

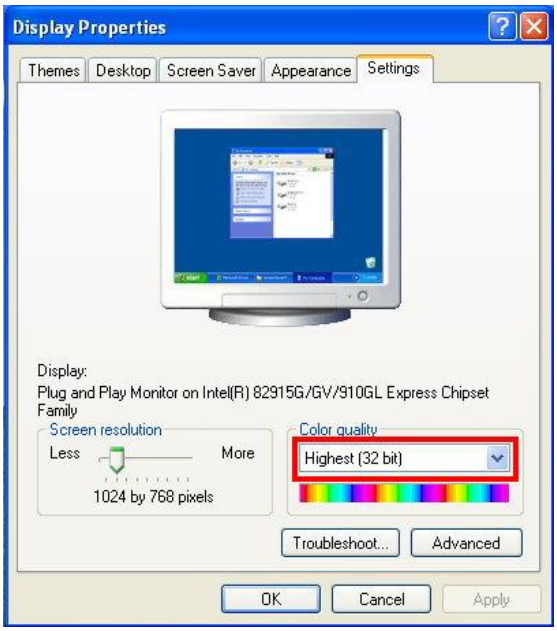
Recording trigger	Motion Detection, IP check, Network break down (wire only), Relay
Video format	AVI, JPEG
Video Playback	Yes
Delete files	Yes
Browser requirement	
OS	Windows7, 2000, XP, 2003, IE 6.0 or above
Hardware	
Recommendation	Intel Dual Core 1.66G,RAM: 1024MB, Graphic card: 128MB
Minimum	Intel 2.8G, RAM: 256MB, Graphic Card: 32MB

III. Product Installation

A. Monitor Setting

i. Right-Click on the desktop. Select " Properties".

ii. Change color quality to highest (32bit).



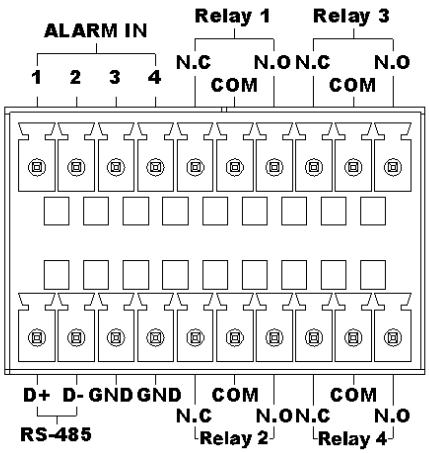
B. Hardware Installation

i. Connect power adaptor

ii. Connect Ethernet cable to Video Server

iii. Connect Video Server to a computer or Local network.

B-1 I/O Control Instruction



I/O terminal connector – used in application, for e.g., motion detection, event triggering, alarm notifications. It provides the interface to:

1 Digital Input (GND+Alarm) – An alarm input for connecting devices that can toggle between an open and closed circuit, for example: PIRs, door/window contacts, glass break detectors, etc. When a signal is received the state changes and the input becomes active.

1 Relay output (COM +N.O. / COM + N.C.) – An output to Relay switch, for example: LEDs, Sirens, etc

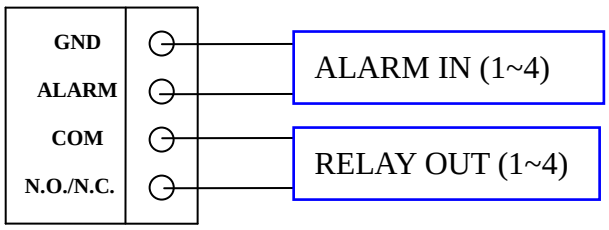
Digital Input

Alarm Input

1. GND (Ground) : Initial state is LOW
2. Alarm : Max. 50mA, DC 3.3V

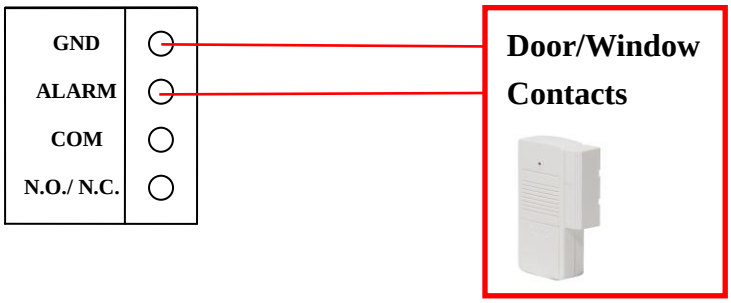
Relay Output

1. COM: (Common)
2. N.O. (Normally Open) / N.C. (Normally Close): Max. 1A, 24VDC or 0.5A, 125VAC

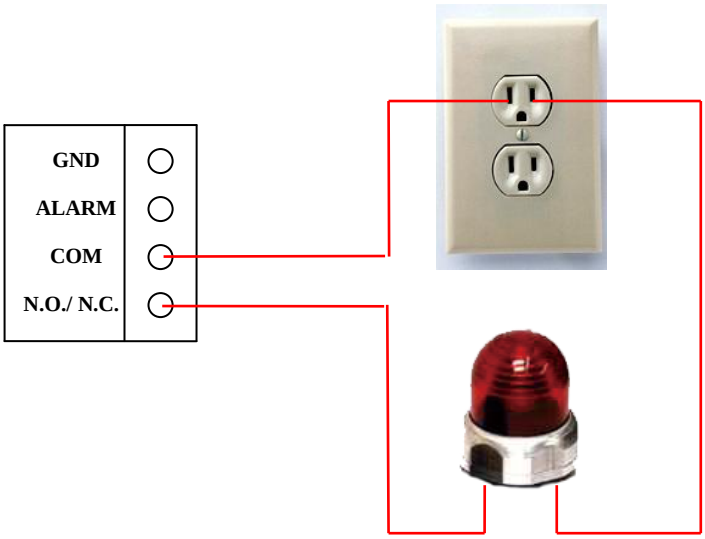


B-2. Relay Connection:

Digital Input connection



Relay Output Connection



C. IP Assignment

i. Use “IP Installer”, comes with CD, to assign the IP address of VIDEO SERVER.

ii. There are two languages for IP Installer：

   a. IPInstallerCht.exe: Chinese version

   b. IPInstallerEng.exe: English version

iii. 3 different IP configurations based on different environments.

   a. Fixed IP (Public IP or Virtual IP)

   b. DHCP (Dynamic IP)

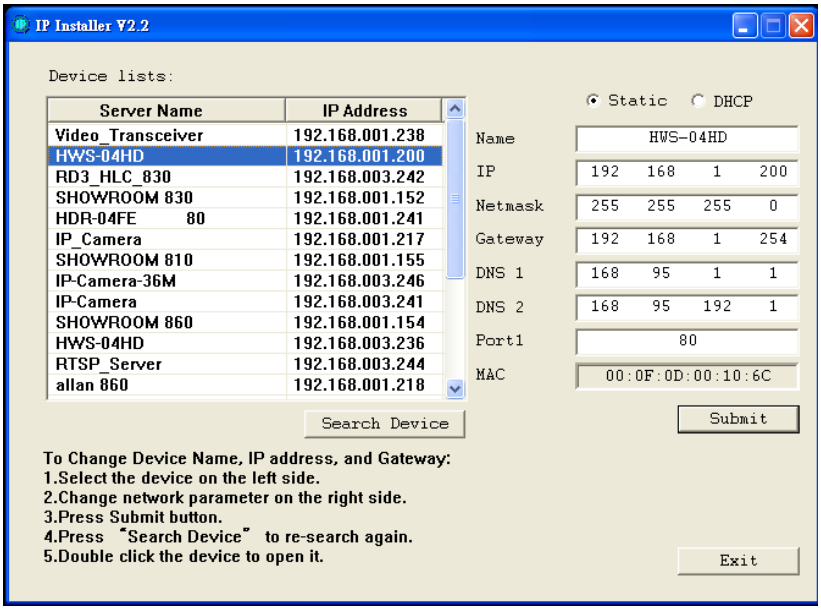
   c. Dial-up (PPPoE)

iv. Execute IP Installer

v. Use Windows XP SP2 or newer version. If the following message popup, please click “Unblock.”

Windows Security Alert
To help protect your computer, Windows Firewall has blocked some features of this program.
Do you want to keep blocking this program?
Name: IPInstaller V2.1 Network Device Scan
Publisher: Unknown
Keep Blocking
Unblock
Ask Me Later
Windows Firewall has blocked this program from accepting connections from the Internet or a network. If you recognize the program or trust the publisher, you can unblock it. When should I unblock a program?

vi. The GUI of IP Installer：



vii. IP Installer searches all IP deceives which connect with the internet and it lists all of them on the left side or the user can click “Search Device” to search again.

viii. When the user clicks on each IP device listed on the left side of IP Installer, the network configuration of the IP device will show on the right side. The user can change the parameter and click on “Submit”. And, then, the following message will popup. Click on “OK” to reboot VIDEO SERVER.

ix. Please make sure the subnet of PC IP address and VIDEO SERVER IP address are the same.

The same Subnet:

VIDEO SERVER IP address: 192.168.1.210

PC IP address: 192.168.1.100

Different Subnets:

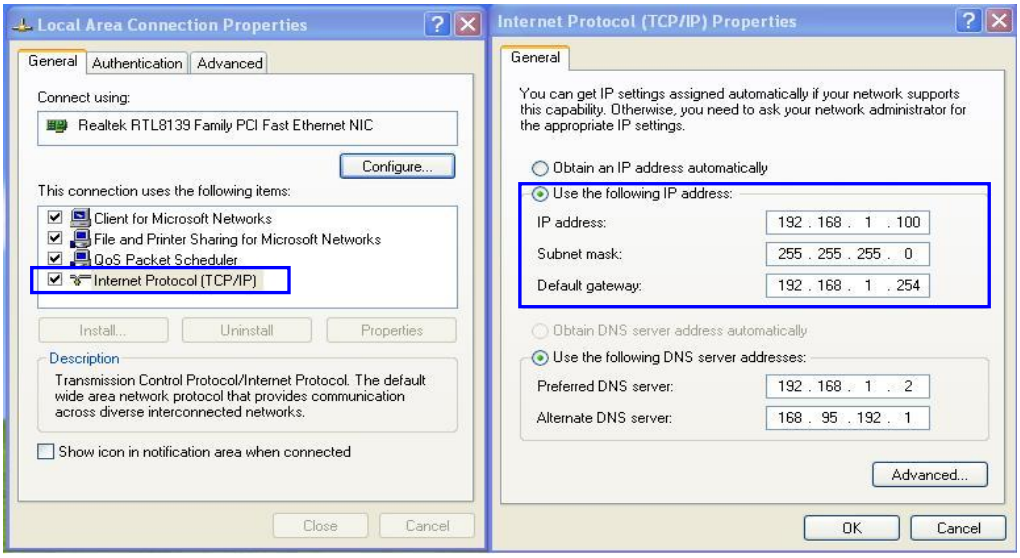
VIDEO SERVER IP address: 192.168.2.210

PC IP address: 192.168.1.100

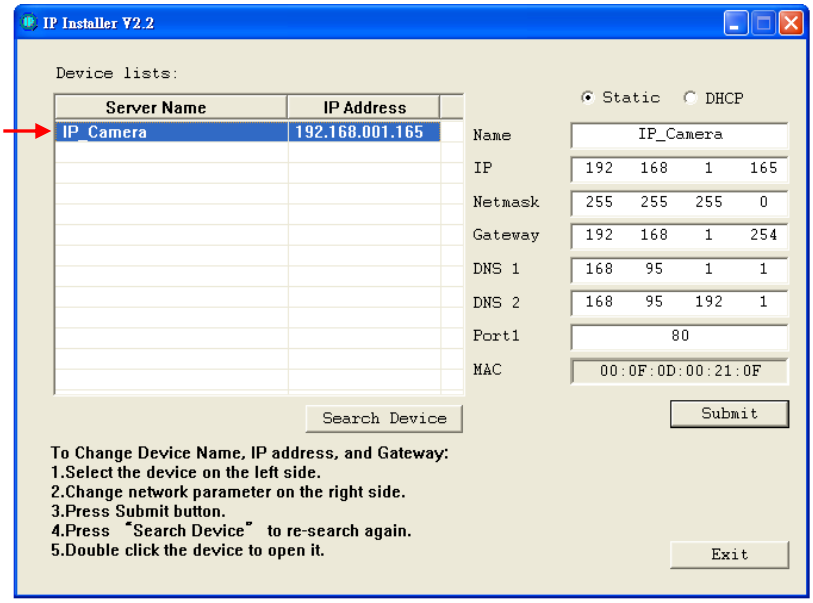
To Change PC IP address:

Control Panel→Network Connections→Local Area Connection Properties→Internet Protocol (TCP/IP) →Properties

Please make sure your Video Server and PC have the same Subnet. If not, please change Video Server subnet or PC IP subnet accordingly.


Local Area Connection Properties
General
Authentication
Advanced
Connect using:
Realtek RTL8139 Family PCI Fast Ethernet NIC
Configure...
This connection uses the following items:
Client for Microsoft Networks
File and Printer Sharing for Microsoft Networks
QoS Packet Scheduler
Internet Protocol (TCP/IP)
Install...
Uninstall
Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
Show icon in notification area when connected
Close
Cancel
Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 1 . 100
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 1 . 254
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 192 . 168 . 1 . 2
Alternate DNS server: 168 . 95 . 192 . 1
Advanced...
OK
Cancel

x. A quick way to access remote monitoring is to left-click the mouse twice on a selected Video Server listed on “Device list” of IP Installer. An IE browser will be opened.

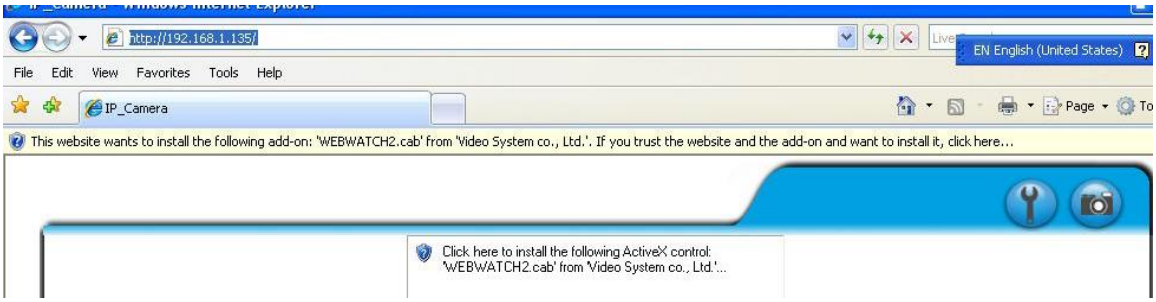


xi. Then, please key in the default “user name: admin” and “password: admin”.

xii. After VIDEO SERVER reboot, click “Search Device” to research VIDEO SERVER. And, use IE Browser for live viewing.

D. Install ActiveX control (setup once only):

For the first time to view VIDEO SERVER via IE browser, it will request the user to install ActiveX.


http://192.168.1.135/
EN English (United States)
File Edit View Favorites Tools Help
IP_Camera
This website wants to install the following add-on: 'WEBWATCH2.cab' from 'Video System co., Ltd.'. If you trust the website and the add-on and want to install it, click here...
Click here to install the following ActiveX control:
'WEBWATCH2.cab' from 'Video System co., Ltd.'...

Also, check the security setting as follows.

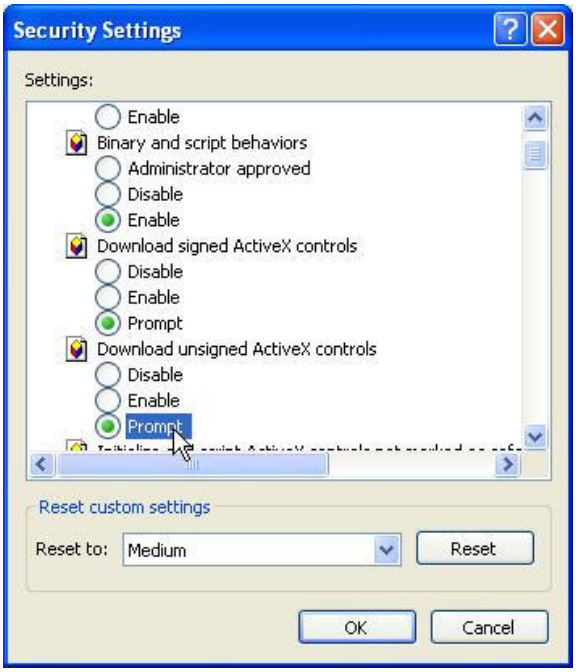
i. IE → Tools → Internet Options… → Security Tap → Custom Level → Security Settings →Download unsigned ActiveX controls → Select “Enable” or “Prompt (Recommend).

ii. IE → Tools → Internet Options → Security Tap → Custom Level… → Security Settings → Initialize and script ActiveX controls not marked as safe → Select “Enable” or “Prompt” (Recommend).

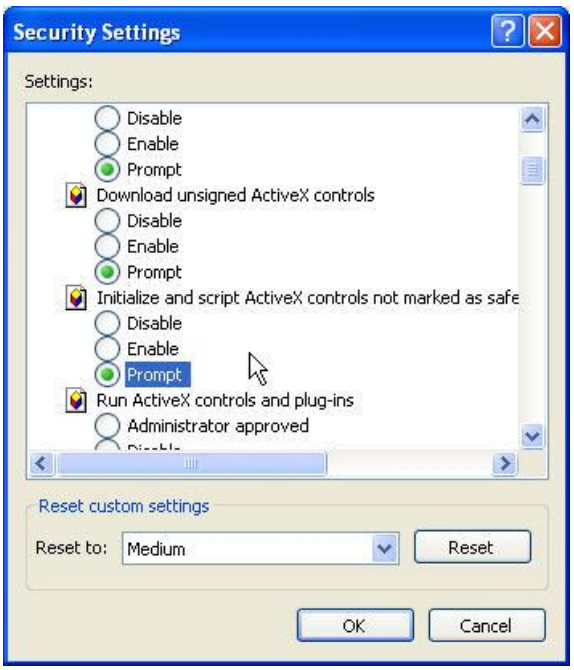
1

2

3



4

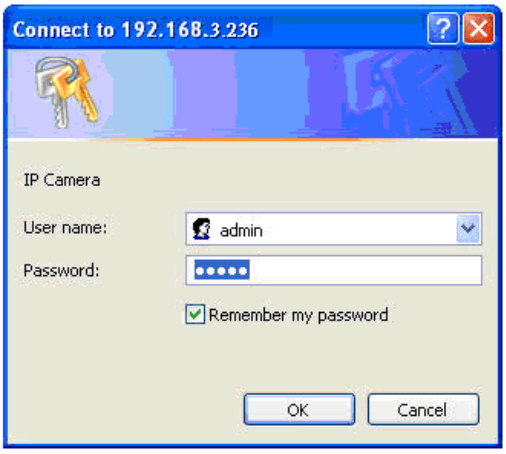


5

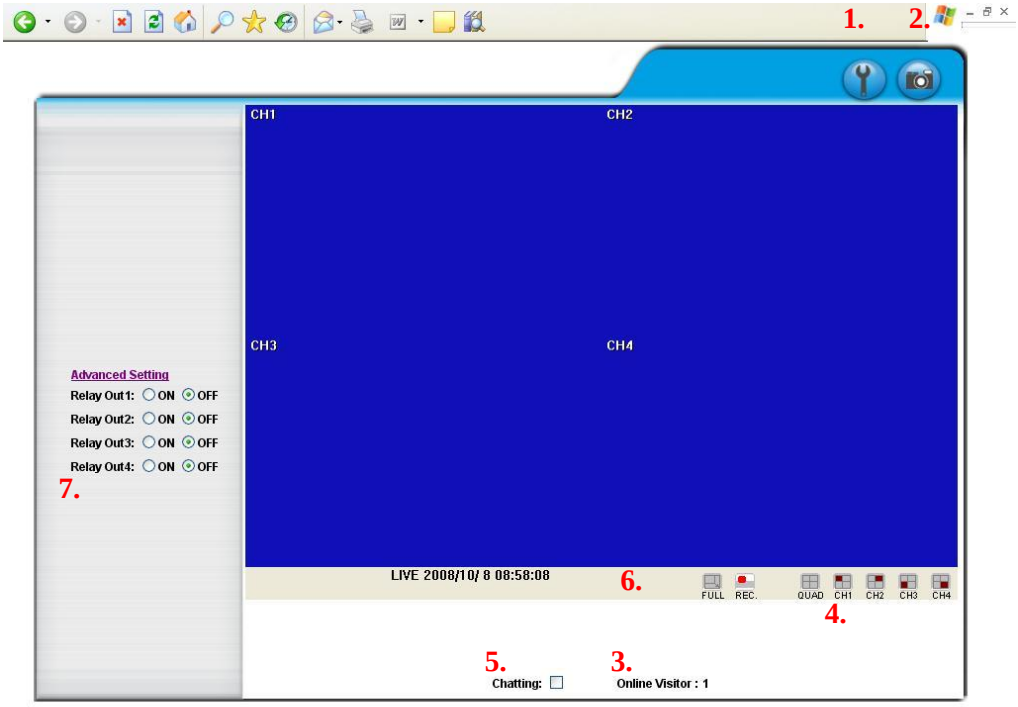
When popup the following dialogue box, click “Yes”.

IV. Live Video

After executing IE browser and typing the IP address of VIDEO SERVER, the following message will popup and request the user to input the user name and password. The default user name and password are “admin” and “admin.”



When the user name and the password are correct, it will connect to VIDEO SERVER via IE Browser. The GUI will display as follows.



1. ：Get into the administration page.

2. ：Video Snapshot.

3. Show how many users connect to this VIDEO SERVER.

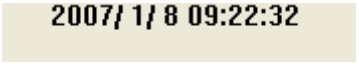
4. Live Video. The user can click on each channel for single channel format.

5. VIDEO SERVER supports 2-way audio. After click on “Chatting”, the user can use the microphone which connects with the PC to talk to the server side.

6. Status and Function keys：

   A． Monitor with full screen. Click on again to return normal mode.

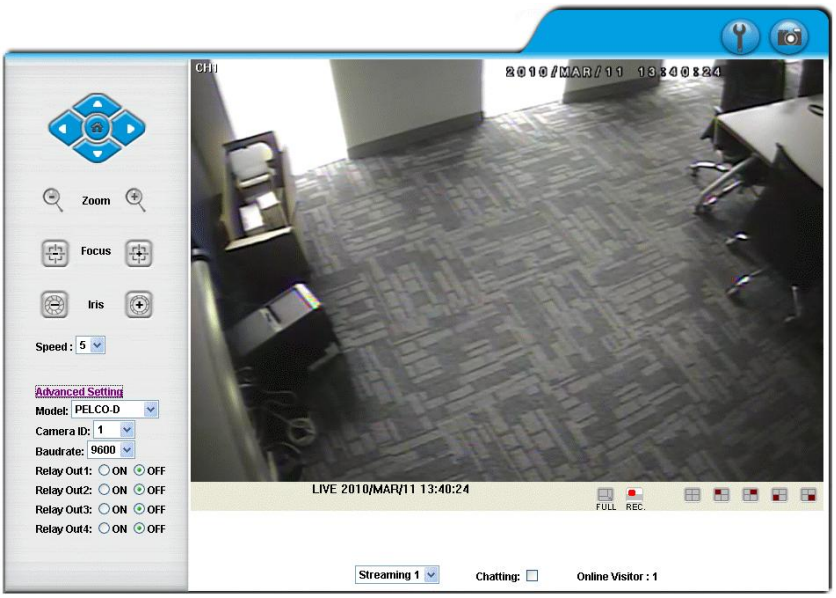
   B． Record with AVI file.

   C． 

   Date and Time displayed.

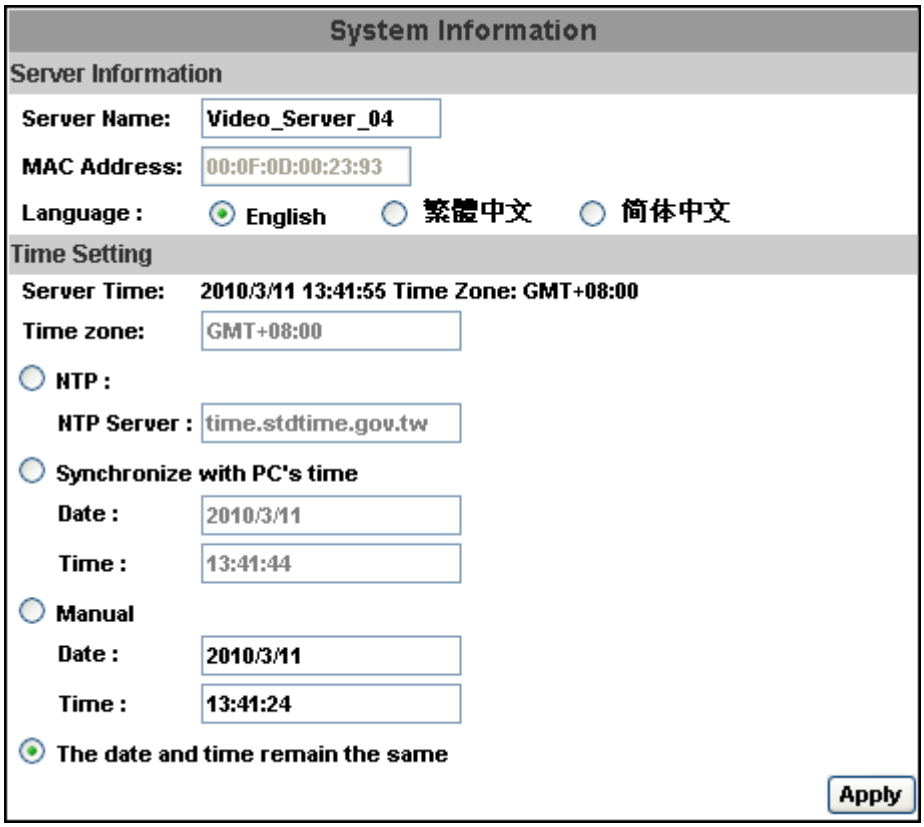
7. Relay Output Control (Video Server supports 4 Relay output)

8. PTZ control. When the user click on a certain channel and if it connects with PTZ camera, the user can click on “Model” to select protocols and use PTZ function to control the camera.



V. VIDEO SERVER Configuration

Click to get into the administration and click on to return to the live viewing as follows.



A. System

i. System Setup

Set up the video server name, select language, and the time on this video server.

a. Sever name：This is the video server name for the user to search on IP Installer.

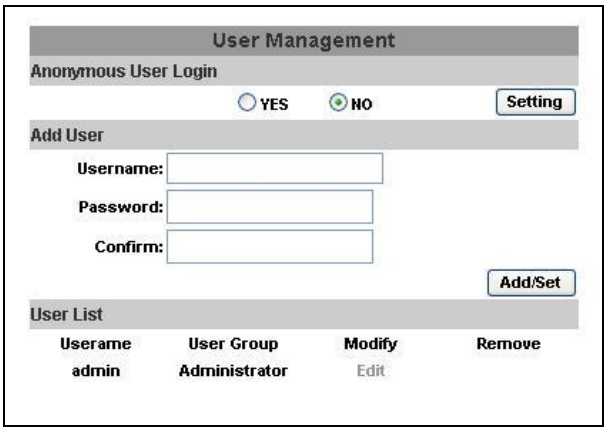
b. Select language：There are English, Traditional Chinese, and simplified Chinese. When a certain language is selected, the following message will popup and ask the user to confirm language changed.

c. Sever time setting：Select options to set up time - “NTP”, “Synchronize with PC’s time”, “Manual”, “The date and time remain the same”.

ii. User Management

Support three authorities: administrator (the highest), user, and anonymous user.

Default Username and Password: admin/ admin



a. Anonymous User Login：

Yes：Allow anonymous login.

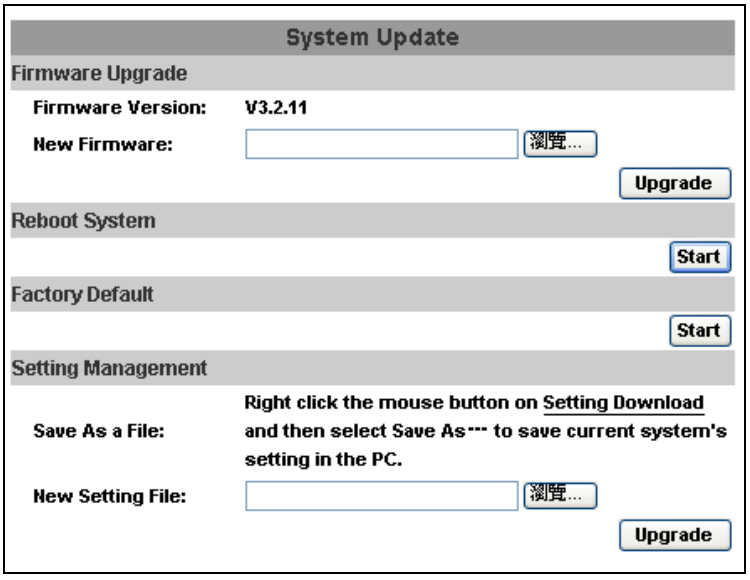
No：Require user name and password to login.

b. Add user：

Type the user name and password and then click on “Add/ Set”.

c. Click on “Edit” or “Delete” to modify the user.

iii. System update

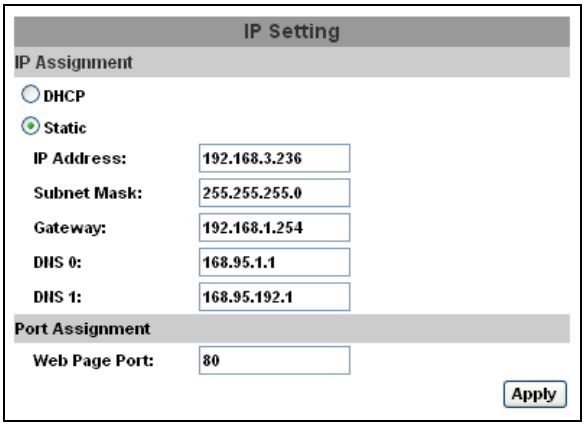


a. To update the firmware online, click “Browse…” to select the firmware. Then click “Upgrade” to the proceed.
b. Reboot system：re-start the Video Server
c. Factory default：delete all the settings and restore defaults system.
d. Setting Management：User may download the current setting to PC, or upgrade from previous saved setting.
    1. Setting download:
       Right-click the mouse button on Setting Download → Select “Save AS…” to save current Video Server setting in PC → Select saving directory → Save
    2. Upgrade from previous setting
       Browse → search previous setting → open → upgrade → Setting update confirm → click **index.html**. to return to main page

B.Network

i. IP Setting

VIDEO SERVER supports static IP and DHCP.



a. DHCP：Use Dynamic Host Configuration Protocol to get all network parameters automatically.

b. Static IP：Type IP address, subnet mask, gateway, and DNS.

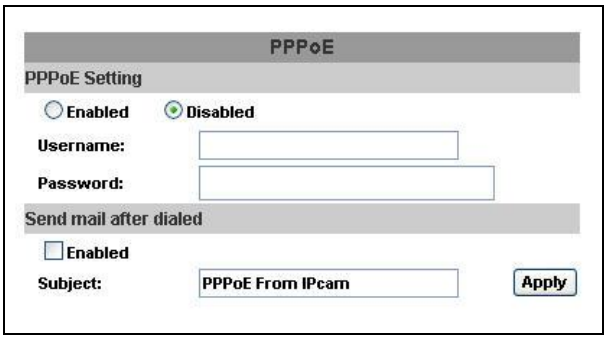
c. DNS：

With DHCP, DNS will be assigned automatically.

Static IP: Based on the network environment.

d. Port：If the user uses the router, some ports have to be adjusted in case of conflict.

ii. PPPoE



If the user wants to use ADSL, please select “Enabled”.

Username: username for ADSL connection.

Password: password for ADSL connection.

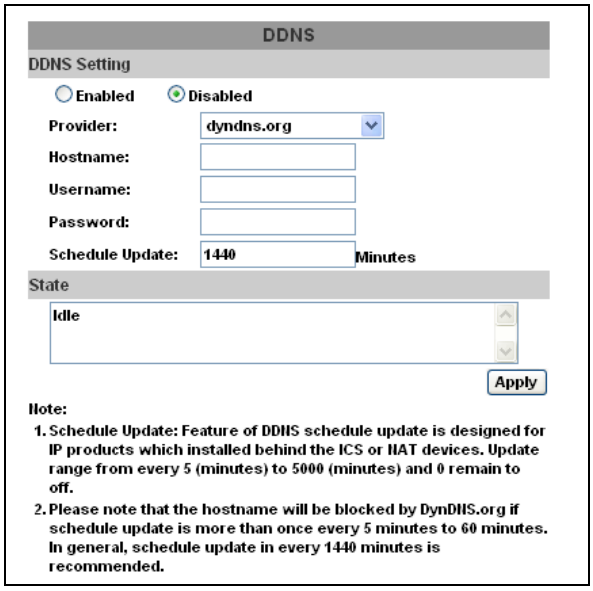
Send mail after dialed：After this function is enabled, it will send an email to a specific mail account. For the mail setting, please refer to IV. “Mail and FTP” settings.

iii. DDNS

VIDEO SERVER supports DDNS. It uses dynamic IP to redirect IP and connect with the video sever.

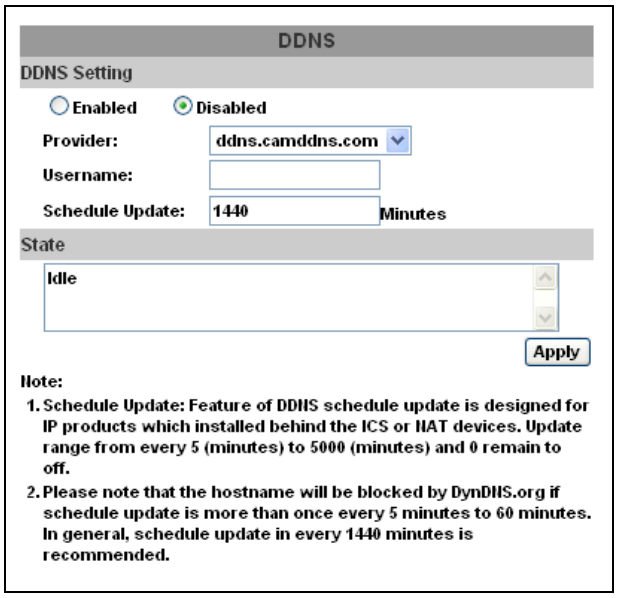
VIDEO SERVER supports 3 kinds of DDNS severs, including dyndns.org, ddns.camddns.com, and ddns2.ydsdvr.com.

a. DynDNS；


DDNS
DDNS Setting
Enabled
Disabled
Provider:
dyndns.org
Hostname:
Username:
Password:
Schedule Update:
1440
Minutes
State
Idle
Apply
Note:
1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

1. DDNS Setting: Enable or Disable DDNS setting.
2. Input the DynDNS's host name, user name, and password.
3. Schedule Update: Default 1440 minutes.
   * dyndns.org: If the user's schedule update is too often, it will be blocked. Recommend the user to update once per day (1440 minutes per day).
4. Click on "Apply" to save.

b. Camddns：


DDNS
DDNS Setting
Enabled
Disabled
Provider:
ddns.camddns.com
Username:
Schedule Update:
1440
Minutes
State
Idle
Apply
Note:
1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

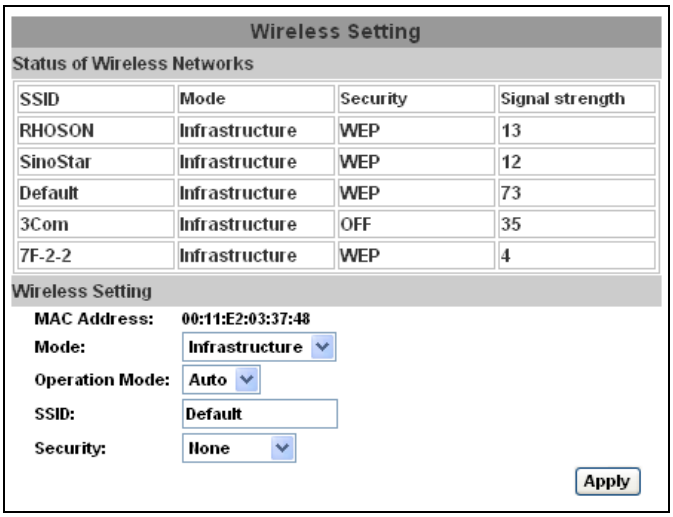
1. Input user name.
2. Schedule Update: Default 1440 minutes.
3. Click on “Apply” on save.

c. DDNS State：

1. Updating: Information updating.
2. Idle: Stop Service.
3. DDNS registration successful, can now log by http://<username>.ddns.camddns.com: Register successfully.
4. Update Failed, the name is already registered: The user name has already been used. Please change another one.
5. Update Failed; please check your internet connection: Network connection failed.

iv. Wireless Setting

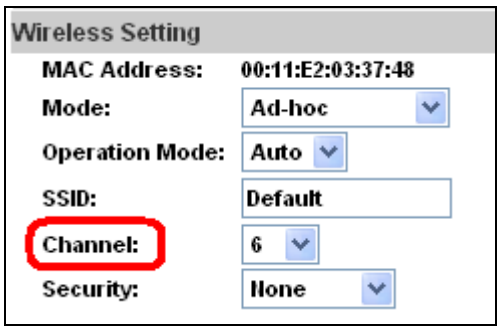
VIDEO SERVER supports 802.11b/g wireless connection. **(Notice: While using wireless setting, the user has to unplug Ethernet cable because both use the same IP. If the user doesn’t unplug Ethernet cable, wireless setting can not be executed).**



a. Status of Wireless Networks；
it can scan all wireless services.

b. Wireless Setting：

1. **Mode**：There are Infrastructure and Ad-hoc. Infrastructure is for connecting with the router. Ad-hoc is for connecting with PC. When the user uses Ad-hoc mode, “Channel” option can be selected.
e.g. If one PC’s channel is 1, the other’s channel has to 1, too.

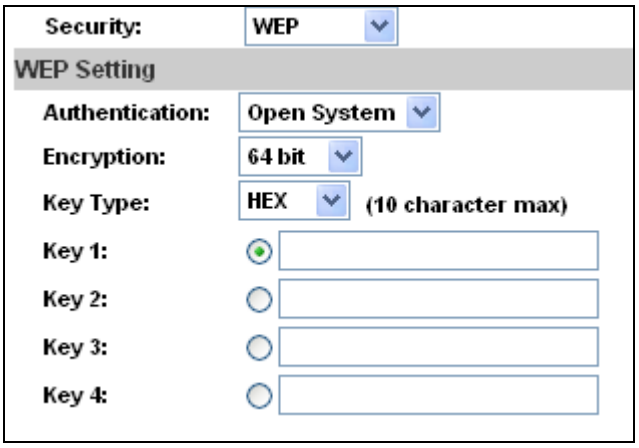


2. **SSID**：Based on AP setting.
3. **Channel**：This is only be used when the user selects Ad-hoc mode in order to avoid conflict.
4. **Security**：It supports “None”, “WEP”, “WPA-PSK” security encryption based on the setting of the Router.

『WEP』

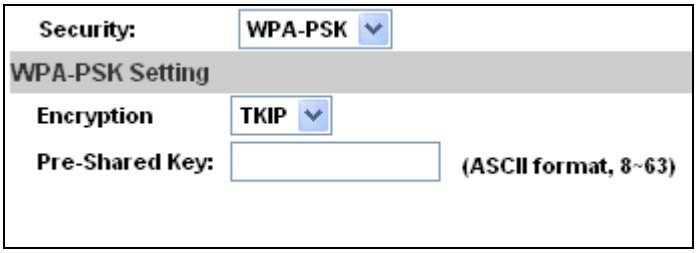
- Authentication：There are Open System and Shared Keys, it is based on different encryptions. This has to be the same as the Router’s setting.
- Encryption：There are 64 bits and 128 bits. This is based on Key Type based on the Router’s setting.

- Key Type：There are HEX and ASCII. When selecting HEX, the user only can input 0~9 characters and use A, B, C, D, E, and F. And, when selecting ASCII, the user can input any character. (case [upper cases/ lower cases] sensitive).
- Key 1~4：Based on Key Type to input characters.



『WPA-PSK』：

- Encryption：There are TKIP and AES.
- Pre-Shared Key：Allow any characters (case [upper cases/ lower cases] sensitive).



C.Multimedia

i. Image Setting

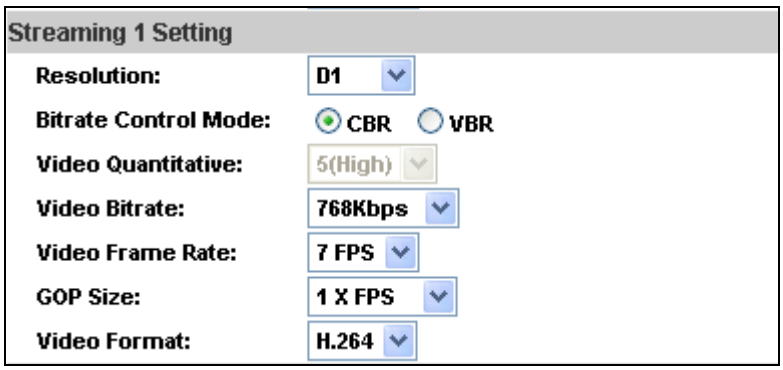
ii. Select each channel to control.

iii. Adjust “Brightness”, “Contrast”, “Hue”, and “Saturation”.

iv. Video Setting

Each connected analog camera can adjust its' video system.

a. Streaming 1 Setting：



1. Resolution：

   There are 4 resolutions to be adjusted.

   D1

   VGA

   QVGA

   QCIF

2. Bitrate Control Mode

   There are CBR〔Constant Bit Rate〕 and VBR〔Variable Bit Rate〕to use.

   CBR：64Kbps~1.5Mbps (the higher the CBR is, the better the video quality is)

   VBR：1~5 (Compression Rate)

3. Video Quantitative：

   There are 5 qualities to be adjusted. The higher the quality is, the bigger the files size is.

4. Video Frame Rate

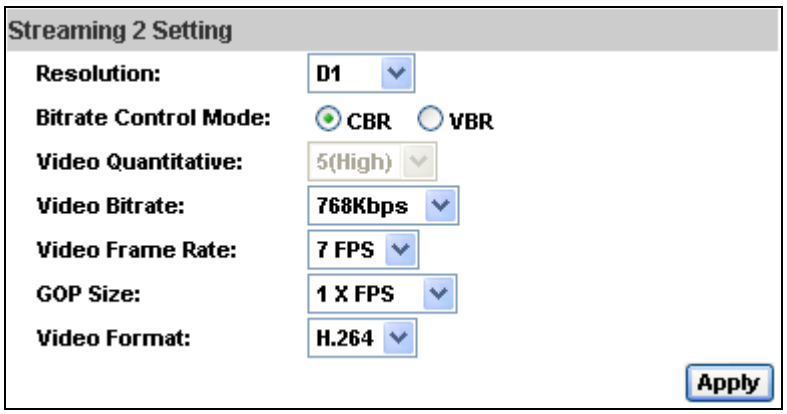
   The video refreshing rate per second.

5. GOP Size

   It means "Group of Pictures". The higher the GOP is, the better the quality is.

6. Video Format：H.264 or JPEG.

b. Streaming 2 Setting：

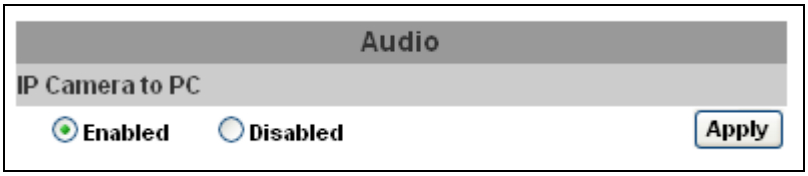


1. Resolution：
   There are 3 resolutions to be adjusted.
   VGA
   QVGA
   QCIF
2. Bitrate Control Mode：
   There are CBR〔Constant Bit Rate〕and VBR〔Variable Bit Rate〕.
   CBR；64Kbps~1.5Mbps。
   VBR：Q=1~5。
   If the bandwidth is smaller than CBR or VBR setup, it will cause legging and incomplete images.
3. Video Quantitative：
   There are 5 qualities to be adjusted. The higher the quality is, the bigger the files size is.
   The higher the quality is, the bigger the file size is. Also not good for internet transmitting
4. Video Frame Rate：
   The video refreshing rate per second. The highest Frame Rate is 30/ FPS.
5. GOP
   It means "Group of Pictures." The higher the GOP is, the better the quality is.
6. Video Format：H.264 or JPEG.

v. Audio:

VIDEO SERVER supports 2-way audio.

a. For the video server to local PC, select “Enabled” to enable this function.



b. For local PC to the video server, click on “chatting” on IE browser.

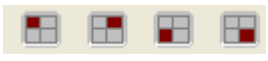
D.Event

VIDEO SERVER provides multiple event settings.

i. Event Setting

Motion Detection
CH1
Channel: 1 CH
Enable CH 1: E-mail FTP SD Out1 Out2 Out3 Out4
Enable CH 2: E-mail FTP SD Out1 Out2 Out3 Out4
Enable CH 3: E-mail FTP SD Out1 Out2 Out3 Out4
Enable CH 4: E-mail FTP SD Out1 Out2 Out3 Out4
Sensitivity: 6 Setting Clear
Sensitivity: 6 Setting Clear
Sensitivity: 6 Setting Clear
Subject: Video Server Warning!
Interval: 10 sec
Record File
File Format: AVI File(with Record Time Setting)
Record Time Setting
Pre Alarm: 5 sec Post Alarm: 10 sec
Network Dis-connected
Dis-connected: Save to SD Storage
Network IP Check
IP Check: Enabled Disabled
IP Address: www.google.com
Interval: 30 sec
IP Check: Save to SD Storage
Apply

VIDEO SERVER supports three motion detection areas on each channel. When the motion is triggered, it can send out the video to a certain email address or upload the video to FTP. If the user has a SD Card, they can do SD backup. The user can clicks on

 to select channels and use the motion detection function.

Use the mouse to drag the area for motion detection area and then click on “Apply” to save.

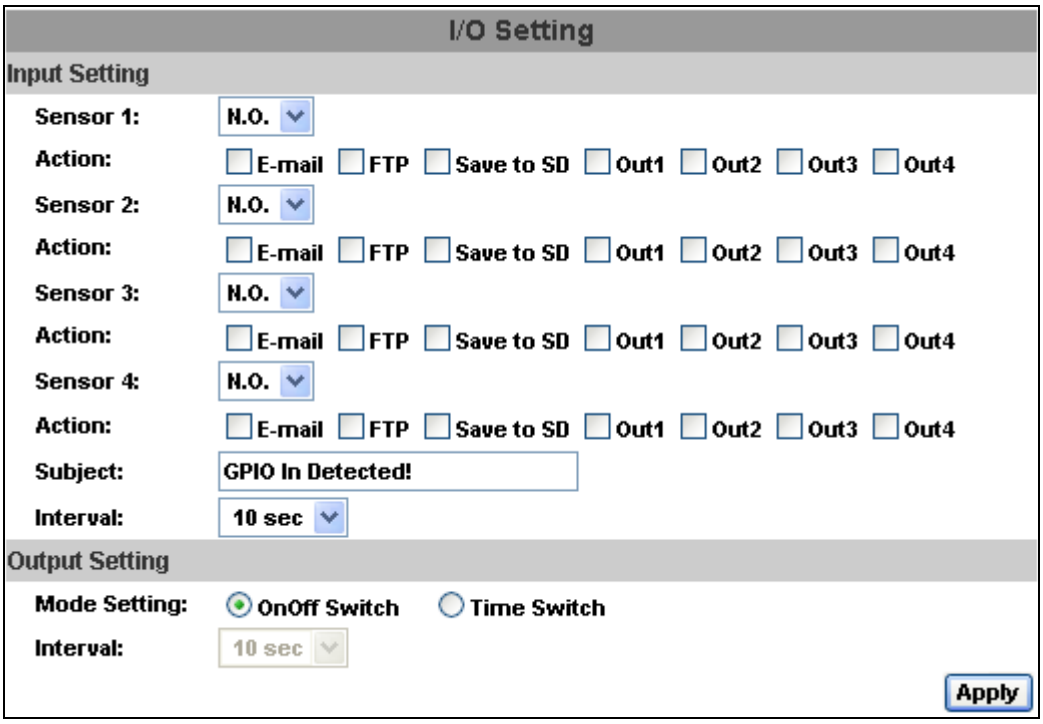
Record Time Setting：Pre Alarm and Post Alarm setups for video start and end time when motion detected, I/O, or other devices got triggered

Network Dis-connected：

When the network is down, it will save the video to local SD card.

This function is only enabled in wire connection.

ii. I/O Setting：

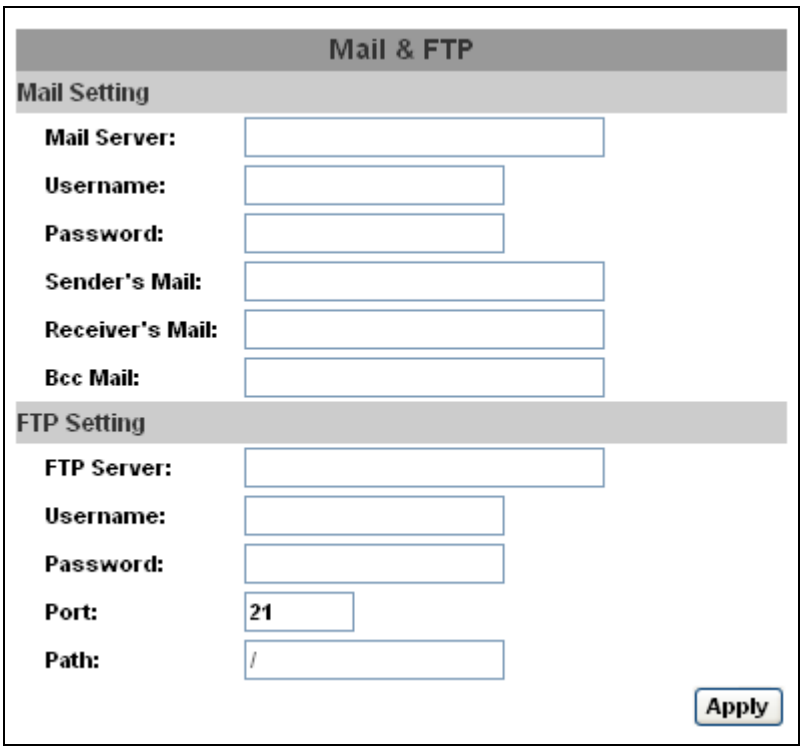


a. Input Setting：

1. Input 1 Action：E-mail/ FTP/ Out1/ Out2/ Out3/ Out4/ Save to SD card.
2. Input 2~4 Action：The same as Input 1.
3. Subject：Default GPIO In Detected!
4. Interval：Default 10 sec.
5. Click on “Apply” to save.

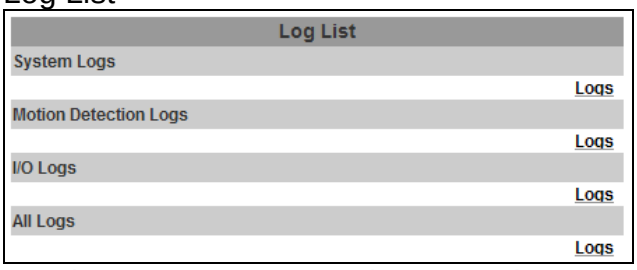
b. Output Setting：Mode Setting：On and Off Switch or Slide Switch. Click on “Apply” to save.

iii. Mail and FTP



To send out the video via mail or FTP, please set up the configuration first.

iv. Log List



Sort by System Logs, Motion Detection Logs and I/O Logs. In addition, System Logs and I/O Logs won't lose data due to power failure.

v. SD card

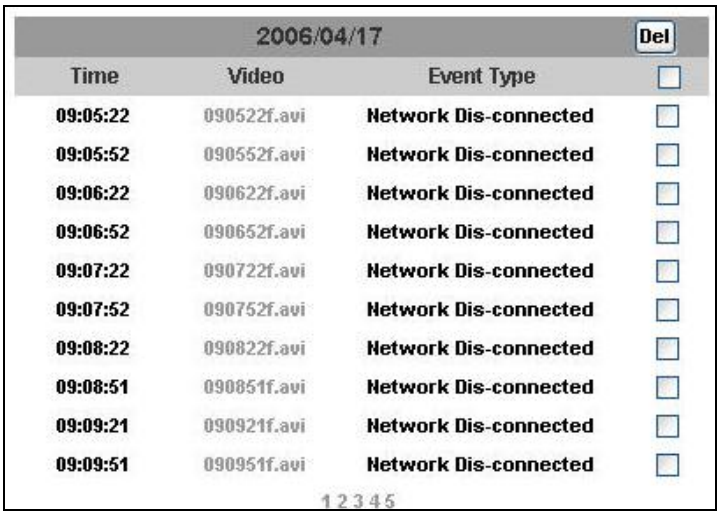
Please Insert SD card before use it. Make sure pushing SD card into the slot completely.

Note：The use of the SD card will affect the operation of the Video Server slightly, such as affecting the frame rate of the

a. Playback：

1. It will show the capacity of the SD card. Click the date listed on

this page. It will show the list of the video.



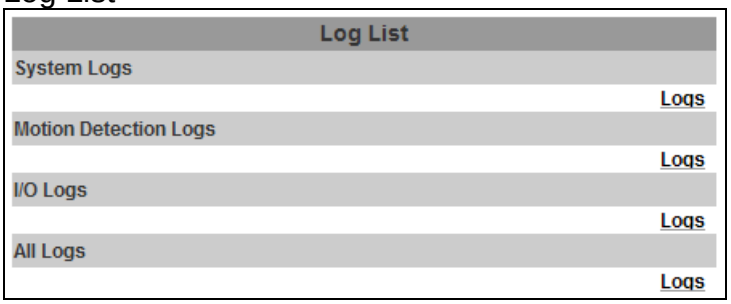
2006/04/17 Del

Time	Video	Event Type	
09:05:22	090522f.avi	Network Dis-connected	☐
09:05:52	090552f.avi	Network Dis-connected	☐
09:06:22	090622f.avi	Network Dis-connected	☐
09:06:52	090652f.avi	Network Dis-connected	☐
09:07:22	090722f.avi	Network Dis-connected	☐
09:07:52	090752f.avi	Network Dis-connected	☐
09:08:22	090822f.avi	Network Dis-connected	☐
09:08:51	090851f.avi	Network Dis-connected	☐
09:09:21	090921f.avi	Network Dis-connected	☐
09:09:51	090951f.avi	Network Dis-connected	☐

1 2 3 4 5

2. The video format is AVI. Click the video to start Microsoft Media Player to play it.
3. To delete the video, check it, then click Del. When the SD card is full, it will remove the oldest video automatically.

vi. Log List

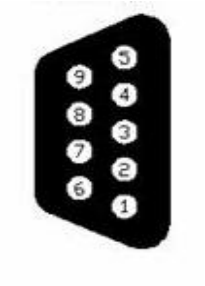


Log List

System Logs	
	Logs
Motion Detection Logs	
	Logs
I/O Logs	
	Logs
All Logs	
	Logs

Sort by System Logs, Motion Detection Logs and I/O Logs. In addition, System Logs and I/O Logs won’t lose data due to power failure.

VI. Factory Default



i. Unplug the power of the Video Server.
ii. Please contrast above RS232 interface image, and then connect Index 2 to 3.
iii. Turn on the Video Server and wait for few minutes until IP installer can search the video server.
iv. Please remove Index 2 and 3 connections.
v. All the setting will be restored to factory default
vi. Default IP address is http://192.168.1.210. Moreover, user name and password are admin

VII. Package contents

1. 4Ch Video Server
2. Adaptor
3. Ethernet Cable
4. CD (user manual, IP installation utility).

Appendix I

SD Card Recommended：

SanDisk 128M	SanDisk 16GB
SanDisk 256M	SanDisk 32GB
SanDisk 512M	Transcend 4GB
SanDisk 1G	Transcend 8GB
SanDisk 2G	Transcend 16GB
SanDisk 4G	Transcend 32GB
SanDisk 8GB	Apacer 4G